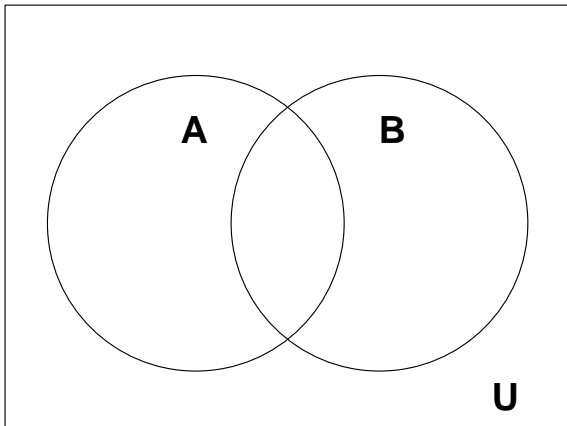


Set Operations and Cartesian Products II

Contemporary Math (MAT-130)

Place the elements of these sets in the proper locations on the given Venn diagram:

1. $U = \{1,2,3,4,5,6,7,8,9,10\}, A = \{1,2,3,4,5\}, B = \{1,3,5,7,9\}$
2. $U = \{a, d, e, f, i, l, m, o, t, u\}, A = \{a, e, i, o, u\}, B = \{a, d, e, f, i, l\}$
3. $U = \{Red, Orange, Yellow, Green, Blue, Indigo, Violet\}, A = \{Red, Yellow, Blue\}, B = \{Green\}$



Use a Venn diagram similar to the one above to shade each set:

4. $A \cap B$
5. $A \cup B$
6. $A \cap B'$
7. $B \cup B'$
8. $(A \cup B)'$
9. $(A \cap B)'$
10. $A' \cup B$
11. $A' \cap A$
12. $A' \cap (B' \cup A')$

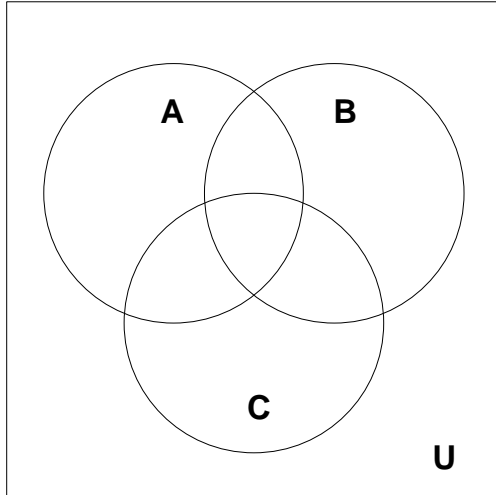
Set Operations and Cartesian Products II

Contemporary Math (MAT-130)

Place the elements of these sets in the proper location on a Venn diagram similar to the one shown below:

13. $U = \{a, b, c, d, e, f, g, h, i, j\}, A = \{a, e, g, i\}, B = \{a, b, c, d, e\}, C = \{c, e, f, g, h\}$

14. $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}, A = \{4, 5, 6, 7\}, B = \{5, 6, 8, 9\}, C = \{2, 3, 5, 7, 8\}$



Use a Venn diagram similar to the one above to shade each set:

15. $A \cap B \cap C$

16. $A \cup B \cup C$

17. $A \cap B \cap C'$

18. $A' \cap B \cap C'$

19. $(A \cap B) \cup C$

20. $A \cap (B \cup C)$

21. $C \cap (B \cap A)'$

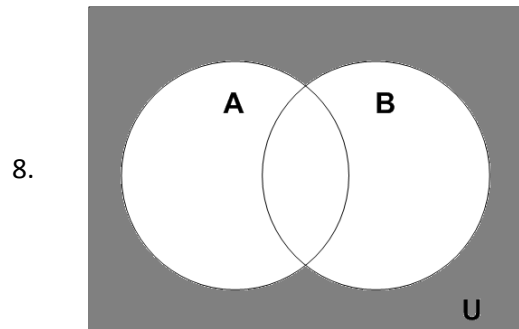
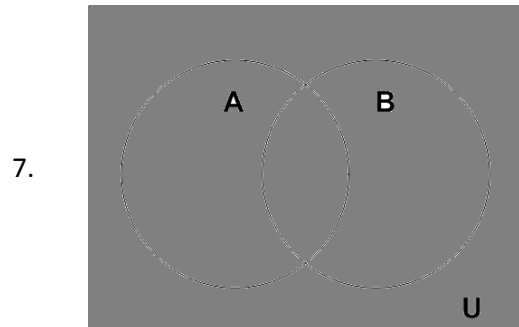
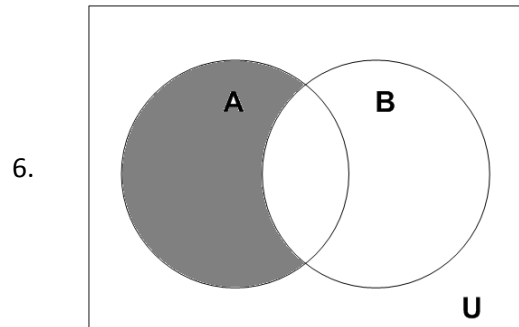
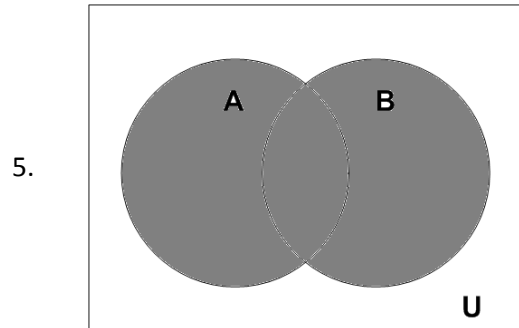
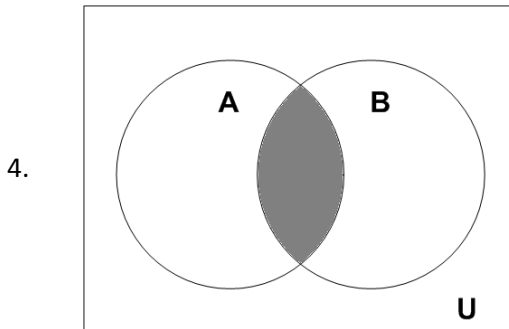
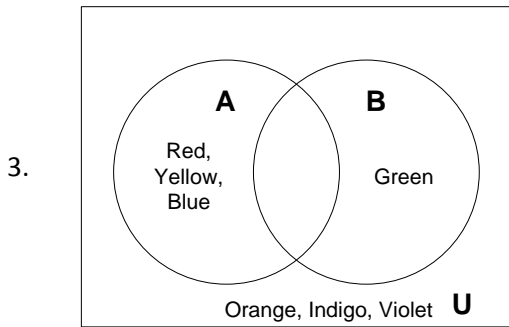
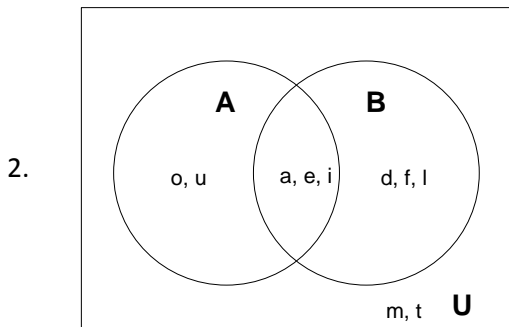
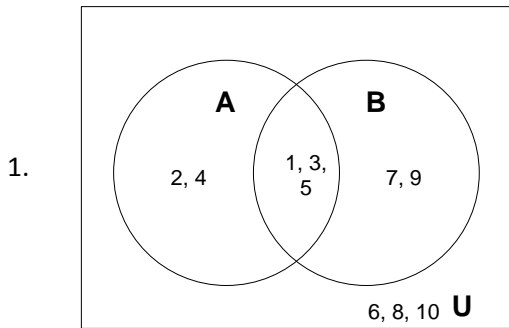
22. $(A \cup B \cup C)'$

23. $(A \cap B) \cup (A' \cap C)$

Set Operations and Cartesian Products II

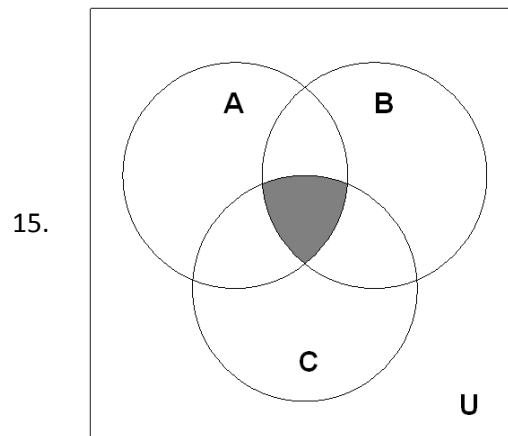
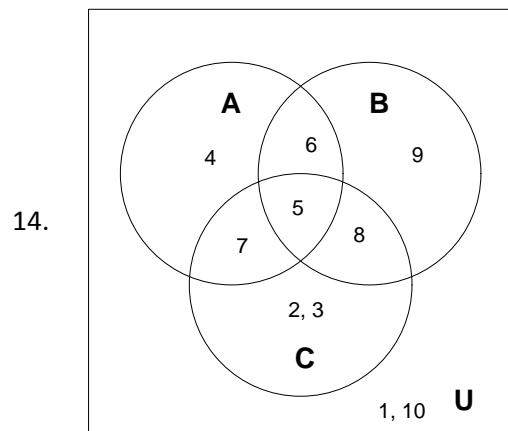
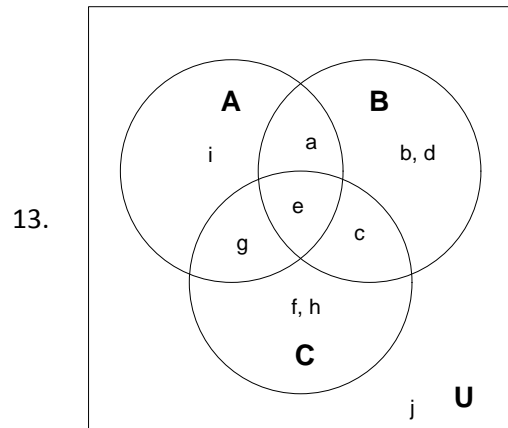
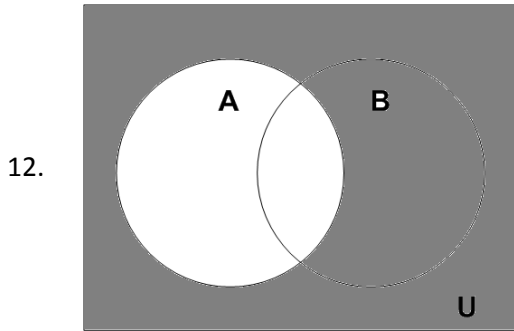
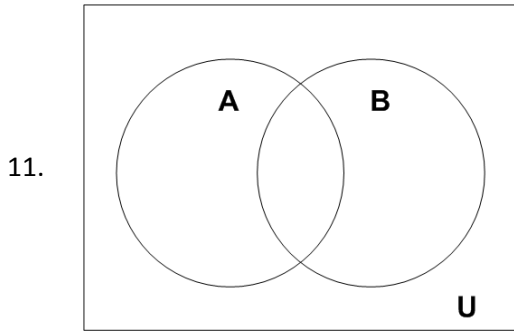
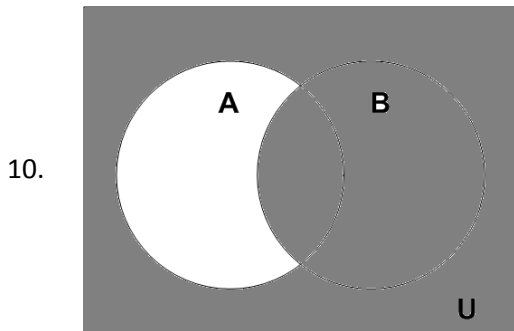
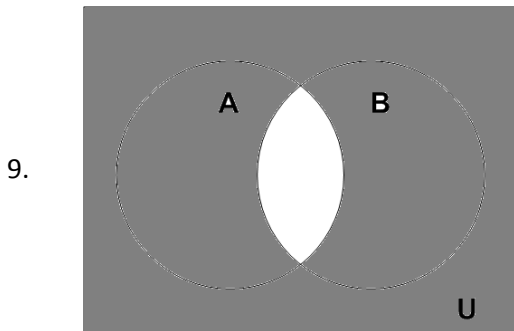
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Solutions:



Set Operations and Cartesian Products II

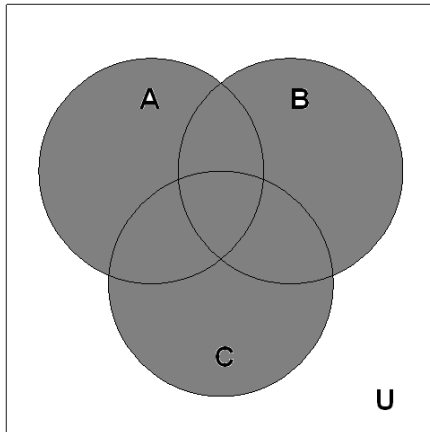
Contemporary Math (MAT-130)



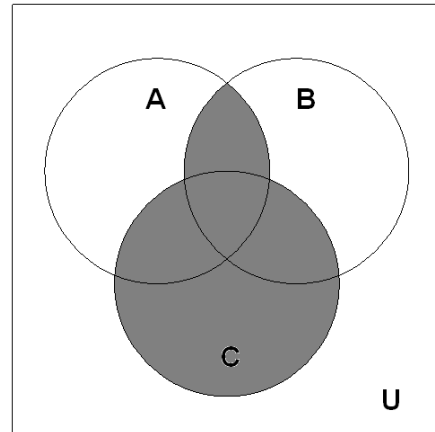
Set Operations and Cartesian Products II

Contemporary Math (MAT-130)

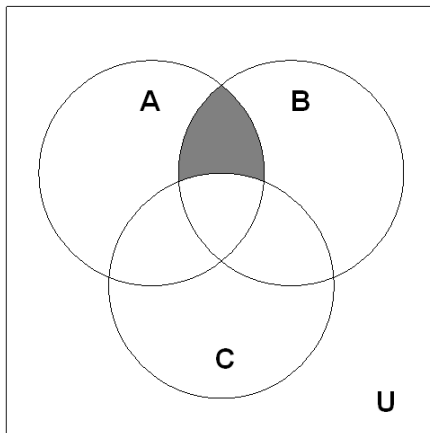
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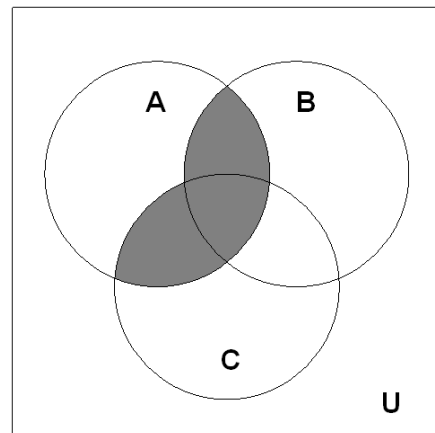
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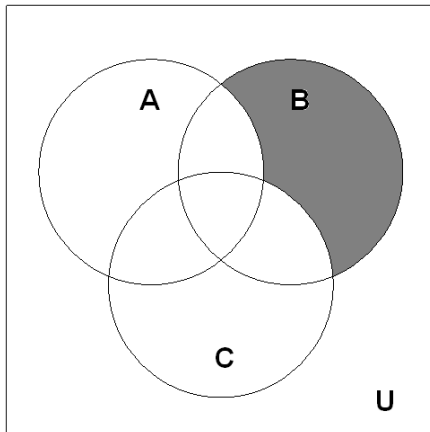
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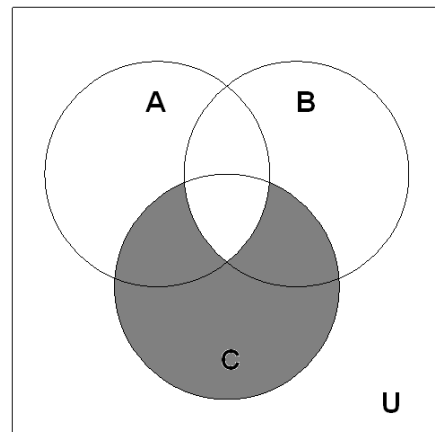
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18.



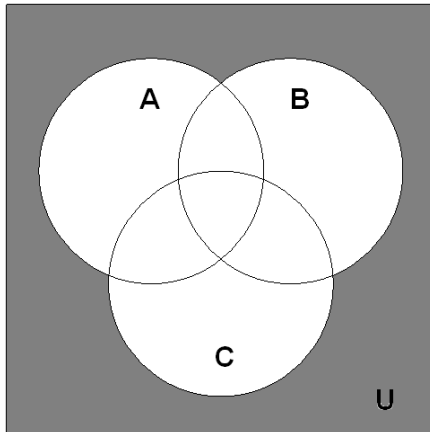
21.



Set Operations and Cartesian Products II

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22.



23.

